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Mark S. Knighton

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EXAMINER

DANIELS, ANTHONY J

ART UNIT

PAPER NUMBER

2622

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/990,831

Applicant(s)

KNIGHTON ET AL.

Examiner

Anthony J. Daniels

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 and 54-73 is/are pending in the application.
- 4a) Of the above claim(s) 60-70 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-26, 28, 30-50, 52-59, 71-73 is/are rejected.
- 7) ☒ Claim(s) 4-6, 27 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment, filed 6/2/2006, has been entered and made of record. Claims 1-51, 54-59 and 71-73 are pending in the application. Claims 60-70 have been withdrawn from consideration.

Response to Arguments

2. Applicant's arguments regarding claims 4 and 29 and the Ohmura et al. reference, filed 11/08/2005, have been reconsidered and are persuasive. The rejection of claims 4 and 29 has been withdrawn. Examiner has also reconsidered the rejection of claims 27 and 51.

3. Applicant's arguments regarding claim 28 and the Ohmura et al. reference have been fully considered but they are not persuasive. Applicant argues, "...Applicants have been unable to discern any part of Ohmura that discloses that the mounting tools 231, which the Examiner equates with the grip, extending downward, when in use, from the digital display assembly, which the Examiner equates with apparatus 200F. Rather, the mounting tools 231 remain at the same level as the apparatus when folded or extended. Thus, Ohmura does not teach each of the elements of claim 28..." The examiner respectfully disagrees with this statement. Applicant assumes that only position in Ohmura et al. that can be considered "in use" is when the mounting tools and the apparatus exist in a plane substantially perpendicular to the force of gravity. The examiner submits that a user looking upward with the mounting tools appropriately mounted would provide the mounting tools in a position extended downward from the apparatus 200F and

Art Unit: 2622

forming an angle of approximately 180 degrees. In simpler terms, the examiner submits that an “in use” position in the device of Ohmura et al. includes one in which the user is looking upward.

4. Applicant's arguments regarding claim 28 and the Blazek reference have been fully considered but they are not persuasive. Applicant argues, “...the LCD 302 which the Examiner equates with the digital display assembly does not “extend across an eye of the user” as recited in claim 28. Rather, the LCD 302 is not visible to the user when the camera is in use...” The examiner respectfully disagrees with this statement. First, the examiner, on p. 12, Line 6 of the previous Office Action, interprets the body including the LCD of Blazek as the digital display assembly. As seen in Figure 3, the resilient eye shade, part of the camera body (digital display assembly), extends across a user of the eye.

5. Applicant's arguments regarding claim 28 and the Rallison et al. reference have been fully considered but they are not persuasive. Applicant argues, “...strap 16 and temple pieces 14a and 14b do not extend downward or form an angle with the image generator 74. Thus, Rallison does not teach each of the elements of claim 28...” The same argument applies here as with Ohmura et al., an “in use” position in the device of Ohmura et al. includes one in which the user is looking upward. Furthermore, in this position, an angle of approximately 180 degrees exists between the image generator and strap and temple pieces.

6. Applicant's arguments regarding claim 28 and the Bronson reference have been fully considered but they are not persuasive. Applicant argues, “...In regard to claim 28, this claim

Art Unit: 2622

includes the elements of a “grip and digital display assembly forming an angle”. The Examiner has not indicated and the Applicants have been unable to discern any part of Bronson that teaches this element of claim 28. Thus, Bronson does not teach the elements of claim 28...” The examiner respectfully disagrees with this statement. The grip and digital display assembly form an angle of about 180 degrees as seen in Figure 1. Furthermore, Bronson discloses a rotating device, which is flexible and can be bent in any direction the user desires.

7. Applicant's arguments regarding claim 54 and the Havey et al. reference have been fully considered but they are not persuasive. The issue at hand is if a mouse provides an absolute mapping to the display. The examiner as in the previous office action stated that the mapping is one of time. More specifically, the real-time movement is provides a one-to-one mapping in the time domain. More specifically, the amount of time taken to physically move the mouse is equivalent to the amount of time taken to move the cursor on the display. While, there is no relationship between the **displacement** of the mouse on the desktop and the distance the pointer moves. There is a relationship between the distance the mouse is moved and the distance the pointer moves. In Windows 2000 Operating System, a setting exists entitled Pointer Speed. In this setting, a user can set a very fast speed, very slow speed and speeds in between of the mouse. In a very fast speed, moving the mouse a distance, d , moves the cursor a distance, d_1 . In the very slow speed, moving the mouse the distance, moves the mouse a distance, $d_2 < d_1$. The relationship can be changed using this setting.

Art Unit: 2622

8. Applicant's arguments regarding claim 55 and the Rallison et al. reference have been fully considered but they are not persuasive. The examiner submits that the distance from the eye to the lens does represent a focal distance otherwise the user would not be able to clearly view the image and leave the invention unfit for its intended purpose.

9. As requested by applicant and required by the MPEP, the examiner is confining the rejections to the best available art. However, the application contains 60 claims. Many of which are directed toward different embodiments and have eclectic features. The examiner has the duty to cite all prior art, which is deemed to be relevant to the claimed subject matter.

10. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1,7 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Okuyama et al. (US # 5,815,741).

As to claim 1, Okuyama et al. teaches an apparatus (Figure 9) comprising: a housing (Figure 9, camera body “90”); a grip coupled to the housing (Figure 9, hand gripping the camera body); and a binocular digital display assembly coupled to the housing (Figure 9, image observing apparatus “91”; Figure 7) and rotatable about the housing between a plurality of angular positions which can be maintained during use (Col. 9, Lines 45-49; *{The image observing apparatus can be rotated about the housing using the flexible signal wire.}*).

As to claim 7, Okuyama et al. teaches the apparatus of Claim 1 further comprising: a lens assembly within the housing (*A lens assembly is inherent in the camera body.*); and an image-sensing array (ISA) optically coupled to the lens assembly (Col. 9, Lines 40-44).

As to claim 21, Okuyama et al. teaches the apparatus of Claim 1 wherein at least a first position is suitable for right-handed use and at least a second position is suitable for left-handed use (*It is inherent both hands can fit in the grip of the camera body.*).

12. Claims 28 and 40 are rejected under 35 U.S.C. 102(e) as being anticipated by Ohmura et al. (US 2004/0130645).

As to claim 28, Ohmura et al. teaches an apparatus (Figure 27) comprising: a grip (Figure 27, mounting tools “231”) having a stowed orientation (Figure 27; *{Examiner interprets stowed orientation as an orientation when the mounting tools “231” are at any angle between 0° and 45° with respect to the axis containing the eyepiece windows “203a” and “203b”.*}) and a deployed orientation (Figure 27; *{Examiner interprets deployed orientation as an orientation when the mounting tools “231” are at any angle between 45° and 90° with respect to the containing the eyepiece windows “203a” and “203b”.*}); and a digital display assembly (Figure

Art Unit: 2622

27, apparatus “200F”) having a stowed orientation (Figure 27; *{Examiner interprets stowed orientation as an orientation when the apparatus “200F” is at any angle between 0° and 45° with respect to the axis defined by the right or left mounting tool “231”}.*) and a deployed orientation (Figure 27; *{Examiner interprets deployed orientation as an orientation when the apparatus “200F” is at any angle between 45° and 90° with respect to the axis defined by the right or left mounting tool “231”}.*), such that, in the deployed orientation, the display is laterally displaced relative to the grip (Figure 27; *{Mounting tool “231” is in deployed orientation and the apparatus “200F” (which contains the display) is laterally displaced from it.}*) such that, in use, a hand holding the grip is laterally displaced relative to a frontal face of a head of a user (*It is inherent that a hand holding the grip is laterally displaced from the frontal face of a head of the user.*), the grip and digital display assembly forming an angle with the grip extending downward from the digital display assembly and the digital display assembly extending across an eye of a user (see Response to Arguments section above).

As to claim 40, Ohmura et al. teaches the apparatus of Claim 28 wherein in the deployed orientation, the grip may pivot to at least one self maintaining position on an axis orthogonal to an axis of rotation of the display assembly (Figure 27; *{Either the right or left mounting tool could pivot on the axis containing the length of the mounting tool which is perpendicular to the vertical axis that cuts through the hinge (not numbered).}*).

13. Claims 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Blazek et al. (US # 4,864,425).

As to claim 28, Blazek et al. teaches an apparatus (Figure 6A) comprising: a grip (Figure 6A, hand-grip “37”) having a stowed orientation (Figure 6A; *{Examiner interprets stowed orientation as an orientation where the hand-grip “37” is disposed within the brackets via the loosening of Allen bolt “38” and adjusting the hand-grip “37” (Col. 6, Lines 18-31).}*) and a deployed orientation (Figure 6A; *{The position seen in Figure 6A is the deployed orientation.}*); and a digital display assembly (Figure 6A, body containing LCD “302”) having a stowed orientation (Figure 6A; *{Examiner interprets stowed orientation as when the hand-grip “37” is held still and the body containing the LCD is rotated to where the hand-grip is disposed within the brackets.}*) and a deployed orientation (Figure 6A; *{The position seen in Figure 6A is the deployed orientation.}*), such that, in the deployed orientation (Figure 6A; *{The position seen in Figure 6A is the deployed orientation.}*), the display is laterally displaced relative to the grip (Figure 6A; *{The body containing the LCD is in deployed position and is laterally displaced from the hand-grip “37”.}*) such that, in use, a hand holding the grip is laterally displaced relative to a frontal face of a head of a user (*It is inherent that a hand holding the grip is laterally displaced from the frontal face of a head of the user.*), the grip and digital display assembly forming an angle with the grip extending downward from the digital display assembly and the digital display assembly extending across an eye of a user (see Response to Arguments section above).

14. Claim 28, 47-50, 55-59 are rejected under 35 U.S.C. 102(e) as being anticipated by Rallison et al. (US # 6,160,666).

As to claim 28, Rallison et al. teaches an apparatus (Figure 1) comprising: a grip (Figure 1, strap “16” and temple pieces “14 a and b”; *{User’s head grips the strap “16” and temple pieces “14 a and b”.*}) having a stowed orientation and a deployed orientation (Col. 5, Lines 14-17, “...compact configuration...” and Figure 1 as seen in deployed); and a digital display assembly (Figure 1 and Figure 15, main portion “12” with LCD generator “74”) having a stowed orientation and a deployed orientation (Col. 5, Lines 1-4; lateral adjustment provides for both orientations, such that, in the deployed orientation, the display is laterally displaced relative to the grip (Col. 5, Lines 1-4; *{Display is laterally displaced relative to the grip in all positions.}*)) such that, in use, a hand holding the grip is laterally displaced relative to a frontal face of a head of a user (Figure 1, *{A hand that can hold the strap is lateral displaced relative to the frontal face of a head of a user.}*), the grip and digital display assembly forming an angle with the grip extending downward from the digital display assembly and the digital display assembly extending across an eye of a user (see Response to Arguments section above).

As to claim 47, Rallison et al. teaches the apparatus of Claim 28 further comprises: a visor (Figures 1 and 15; *{Examiner interprets visor as shield “302” and forehead brace “22”.*}) coupled to the housing (Figures 1 and 15) and to rest upon a forehead of the user when held by a user for use (Figure 15), the visor having a cross-dimension selected to maintain a predetermined focal distance between the first lens and an eye of the user (Figure 1), the visor pivots coupled to the display assembly to pivot between an open and a closed position (Col. 5, Lines 8-17; *{Examiner interprets closed position where the visor, as interpreted by examiner, is pivoted above user’s eyes via the left and right strap pivots “17a and 17b”. Open position is a position as seen in Figure 15. As the main portion pivots, the shield pivots as well.}*).

As to claim 48, Rallison et al. teaches the apparatus of Claim 47 wherein pivoting the visor to the open position activates the display (Figure 15; *{Activated display is interpreted as being able to be viewed (used for intended purpose). In Figure 15, the open position is as seen.}*).

As to claim 49, Rallison et al. teaches the apparatus of Claim 47 wherein when the visor is in the closed position, the display is in an inactive state (Col. 5, Lines 8-17; *{Closed position is visor and entire housing pivoted upward so LCD cannot be seen.}*).

As to claim 50, Rallison et al. teaches the apparatus of Claim 47 wherein the visor protects a lens of the display assembly when in the closed position (Col. 10, Lines 49-54; *{Shield protects in all positions.}*).

As to claim 55, Rallison et al. teaches a handheld apparatus (Figure 1, *{The apparatus in Figure 1 is able to be held by a hand.}*) comprising: a housing (Figure 1, main portion “12”) defining a first opening (Figure 1, opening on other side of the left lens “2” which the user’s eyes look through); a digital display disposed within the housing (Col. 2, Lines 3-8; Figure 15, image generator LCD “74”); a first lens disposed to be between a first eye of a user and the display when in use (Col. 2, Lines 58-67; Col. 3, Lines 1-4); and a visor (Figures 1 and 15; *{Examiner interprets visor as shield “302” and forehead brace “22”.}*) coupled to the housing (Figures 1 and 15) and to rest upon a forehead of the user when held by a user for use (Figure 15), the visor having a cross-dimension selected to maintain a predetermined focal distance between the first lens and an eye of the user (Figure 1).

Art Unit: 2622

As to claim **56**, Rallison et al. teaches the apparatus of Claim 55 further comprising: a second lens disposed to be between a second eye of the user and the display when in use such that a binocular view is presented to the eyes of the user (Col. 2, Lines 58-67; Col. 3, Lines 1-4).

As to claim **57**, Rallison et al. teaches the apparatus of Claim 55 wherein the visor is pivotally coupled to the housing to pivot between an open position and a closed position (Col. 10, Lines 49-54)

As to claim **58**, Rallison et al. teaches the apparatus of Claim 55 wherein the cross-dimension is adjustable within a range (Col. 5, Lines 1-4; *{The lateral displacement of the strap laterally displaces cross dimension of the brace "22" with respect to the strap.}*).

As to claim **59**, Rallison et al. teaches the apparatus of Claim 55 wherein the visor is coupled to the housing so as to block some ambient light from the eye of the user when the apparatus is in use (Col. 10, Lines 44-49, "...converted from see-through...").

15. Claims 28,31,34,35,41-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Bronson (US # 6,384,863).

As to claim **28**, Bronson teaches an apparatus (Figure 1A) comprising: a grip (Figure 1A, hand grip "100") having a stowed orientation (Figure 1A) and a deployed orientation (Figure 1B; *{In a frame of reference of someone who is moving up with the digital camera (Col. 3, Lines 21-26) and looking down at the hand grip, it would seem as if the hand grip is moving down to a deployed orientation.}*); and a digital display assembly having a stowed orientation (Figure 1A) and a deployed orientation (Figure 1B), such that, in the deployed orientation, the display (Col. 3, Lines 58-61, "...microdisplay viewfinder...") is laterally displaced relative to the grip (Figure

Art Unit: 2622

1B) such that, in use, a hand holding the grip is laterally displaced relative to a frontal face of a head of a user (Figure 1B; Col. 4, Lines 52-60), the grip and digital display assembly forming an angle with the grip extending downward from the digital display assembly and the digital display assembly extending across an eye of a user (see Response to Arguments section above).

As to claim 31, Bronson teaches the apparatus of Claim 28 further comprising: a sensor to detect relative rotation of the display assembly (Col. 3, Lines 62-65; *{The processor, inherent in the digital camera, acts as a sensor, in that, when the button is depressed to initiate array rotation, the processor senses, by an inherent means of software or hardware, whether the camera is in portrait or landscape position in order to effectively position the array back to either the portrait or landscape position depending on the current position.}*) and to signal the display to adjust an image on the display to maintain a consistent orientation of an image displayed (*The consistent orientation of the image is having the entire subject captured using the portrait or landscape position.*).

As to claim 34, Bronson teaches the apparatus of Claim 28 further comprising: a lens assembly coupled to the grip (Figure 1A, lens “120”); and an image-sensing array (ISA) optically coupled to the lens assembly (Col. 3, Lines 62-65, “...image array...”; *{It is inherent that the image array is optically coupled to the lens “120”.}*).

As to claim 35, Bronson teaches the apparatus of Claim 34 further comprising: a sensor to detect a position of the display assembly relative to the ISA (Col. 3, Lines 62-65; *{The processor, inherent in the digital camera, acts as a sensor, in that, when the button is depressed to initiate array rotation, the processor senses, by an inherent means of software or hardware, whether the camera is in portrait or landscape position in order to effectively position the array*

back to either the portrait or landscape position depending on the current position.}) and cause an adjustment to an image displayed on the display assembly based on the position to maintain a consistent orientation of a target on the display (The consistent orientation of the image is having the entire subject captured using the portrait or landscape position.).

As to claim **41**, Bronson teaches the apparatus of Claim 31 wherein in the deployed orientation, the grip defines a first acute angle away from a body of an operator to permit comfort and reduce stress on the hand and arm (*It is inherent that the body of an operator could be at a position to where, measured from the body of the operator, the grip is an acute angle away.*).

As to claim **42**, Bronson teaches the apparatus of Claim 41 wherein any actuation of the trigger causes a capture (Col. 2, Lines 18,19, "...shutter trigger...").

As to claim **43**, Bronson teaches the apparatus of Claim 28 wherein the pointer button (Col. 3, Lines 55-58, "...select button...") resides within a region (Figure 1A, hand grip "100" is the region) and wherein a position of the pointer button within the region is absolutely mapped to the display (*The depressing of select button (position) provides an instruction on the microdisplay viewfinder to the camera.*).

As to claim **44**, Bronson teaches the apparatus of Claim 28 wherein the trigger and the pointer button provide access to substantially all user controls without the need for other buttons (Col. 3, Lines 55-58).

16. Claim 54 is rejected under 35 U.S.C. 102(e) as being anticipated by Havey et al. (US # 6,597,346).

Art Unit: 2622

As to claim 54, Havey et al. teaches an apparatus (Figure 8) comprising: a binocular display assembly (Figure 8; Col. 8, Lines 25-44); an execute input interface (Col. 7, Lines 31-39); and a pointer interface (Figure 1, user input device “30”) providing absolute mapping between a pointer button and a display of the display assembly (Col. 7, Lines 31-39) wherein substantially all functions of the apparatus can be accessed using only the pointer interface and the execute input interface (Col. 5, Lines 17-20).

17. Claims 71-73 are rejected under 35 U.S.C. 102(e) as being anticipated by Taguchi et al. (US # 6,871,010).

As to claim 71, Taguchi et al. teaches an apparatus comprising: a handheld camera (Figure 2); a display integrated into the camera (Figure 2, viewfinder “8”), the display having a first region to display first image at a full display resolution; and a second region to simultaneously display a second image at substantially reduced resolution (Figure 6).

As to claim 72, Taguchi et al. teaches the apparatus of Claim 71 wherein the second region is an inset within the first region (Figure 6).

As to claim 73, Taguchi et al. teaches the apparatus of Claim 71 wherein the first image and the second image may be toggled between a current view of the camera and a previously captured image (Figure 6; Figure 9; *{Examiner refers to current view of the camera as the received still picture, and the previously captured image as the received motion picture.}*).

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 2,3 and 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Okuyama et al. (US # 5,815,741) in view of Ohmura et al. (US 2004/0130645).

As to claim 2, Okuyama et al. teaches the apparatus of Claim 1, comprising two display elements (Figure 6, display elements "2"). The claim differs from Okuyama et al. in that it further requires that the binocular display assembly comprises: a first lens to be a focal distance from a first display element of the two display elements and second lens to be a focal distance from the second of the two display elements when the displays are in a deployed orientation.

In the same field of endeavor, Ohmura et al. teaches a binocular digital display assembly comprising two LCD elements (Figure 28, elements "210a" and "210b"). Galilean magnifying lenses are disposed between the eye of the user and the display elements (Figure 28, lenses "232a" and "232b"; ([0385])). In light of the teaching of Ohmura et al., it would have been

obvious to one of ordinary skill in the art to include the Galilean magnifying lenses in the image observing apparatus of Okuyama et al., because an artisan of ordinary skill in the art would recognize that this would make it possible to extend the freedom of design and arrangement and also provide a greater magnifying ratio (see Ohmura et al., [0385]).

As to claim 3, Okuyama et al., as modified by Ohmura et al., teaches the apparatus of Claim 2 wherein the display elements are one of liquid crystal displays (LCDs), organic light emitting diode (OLED) displays, Liquid Crystal On Silicon (LCOS) displays, electroluminescent (EL) displays, and retinal scan lasers (see Okuyama et al., Col. 4, Lines 27-30).

As to claim 9, Okuyama et al. teaches the apparatus of Claim 1. The claim differs from Okuyama et al. in that it further requires that the apparatus comprises a distributed network interface coupled to the display assembly.

In the same field of endeavor, Ohmura et al. teaches a camera that comprises an antenna for transmitting and receiving images (Figure 43, antenna “325”; [0408]). In light of the teaching of Ohmura et al., it would have been obvious to one of ordinary skill in the art to include the antenna of Ohmura et al. (Figure 43) in the camera of Okuyama et al., because an artisan of ordinary skill in the art would recognize that this would allow for the transfer of digital images among cameras without the need for a cable that prevents portability.

19. Claims 8,10-15,17,18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okuyama et al. (US 5,815,741) in view of Bronson (US # 6,384,863).

As to claim 8, Okuyama et al. teaches the apparatus of Claim 7. The claim differs from Okuyama et al. in that it further requires a sensor to detect a position of the display assembly

Art Unit: 2622

relative to the ISA and cause an adjustment to an image displayed on the display assembly based on the position to maintain a consistent orientation of a target on the display.

In the same field of endeavor, Bronson teaches a single button used to switch an image sensing array to and from landscape position and portrait position (Col. 3, Lines 62-65; *{The processor, inherent in the digital camera, acts as a sensor, in that, when the button is depressed to initiate array rotation, the processor senses, by an inherent means of software or hardware, whether the camera is in portrait or landscape position in order to effectively position the array back to either the portrait or landscape position depending on the current position.}*). In light of the teaching of Bronson, it would have been obvious to one of ordinary skill in the art to include the ability of the camera of Okuyama et al. to switch between landscape and portrait position, because an artisan of ordinary skill in the art would recognize that this would allow the user the ability to more appropriately acquire more horizontal or vertical information.

As to claim 10, Okuyama et al. teaches the apparatus of Claim 7. The claim differs from Okuyama et al. in that it further requires that the binocular display assembly comprises a photographic light source.

In the same field of endeavor, Bronson teaches a photographic fill-in flash on its display assembly (Figure 1, fill-in flash “150”). In light of the teaching of Bronson, it would have been obvious to one of ordinary skill in the art to include a light source in the binocular display assembly of Abe, as modified by Bronson, because this would allow the image captured to be more illuminated.

As to claim 11, Okuyama et al. teaches the apparatus of Claim 7 wherein the binocular display assembly a photographic light source positioned sufficiently far from the lens assembly

Art Unit: 2622

to reduce illumination errors (see rejection of claim 10 above; *{It is inherent that the fill-in flash of Bronson is of sufficient space to avoid errors and when combined with Abe, this same distance would apply.}*)).

As to claim 12, Okuyama et al. teaches the apparatus of Claim 7. The claim differs from Okuyama et al. in that it further requires a trigger to cause a capture by the ISA, the trigger disposed on the grip to allow actuation by an index finger of a hand holding the grip.

In the same field of endeavor, Bronson teaches a camera comprising a trigger button disposed on a grip used for capturing an image (see Bronson, Figure 1, trigger button “110”; Col. 2, Lines 18-21). In light of the teaching of Bronson, it would have been obvious to one of ordinary skill in the art to include the ability the trigger button in the camera of Okuyama et al., because an artisan of ordinary skill in the art would recognize that this would provide an ability to capture an image when the hand is holding camera in a more ergonomic fashion.

As to claim 13, Okuyama et al. teaches the apparatus of Claim 12 wherein any actuation of the trigger causes a capture (Col. 2, Lines 18-21).

As to claim 14, Okuyama et al. teaches the apparatus of Claim 1 further comprising: a pointer button coupled to the grip to provide an interface for user manipulation of a pointer within the display (see Bronson, Col. 3, Lines 55-61, “...select button...”).

As to claim 15, Okuyama et al. teaches the apparatus of claim 14 wherein the pointer button is disposed to allow actuation by the thumb of a hand holding the grip (see Bronson, Col. 3, Lines 47-49).

As to claim 17, Okuyama et al. teaches The apparatus of Claim 14 wherein the pointer button (see Bronson, Col. 3, Lines 55-58, “...select button...”) resides within a region (see

Art Unit: 2622

Bronson, Figure 1A, hand grip “100” is the region) and wherein a position of the pointer button within the region is absolutely mapped to the display (*The depressing of select button (position) provides an instruction on the microdisplay viewfinder to the camera.*).

As to claim 18, Okuyama et al. teaches the apparatus of Claim 1 wherein the trigger and the pointer button provide access to substantially all user controls without the need for other buttons (see Bronson, Col. 3, Lines 55-58).

20. Claims 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okuyama et al. (US # 5,815,741) in view of Bronson and further in view of Blazek et al. (US # 4,864,425).

The examiner believes claim 16 should depend from claim 14, because it is the first claim that introduces the pointer button.

As to claim 16, Okuyama et al. teaches the apparatus of Claim 1. The claim differs from Okuyama et al., as modified by Bronson, in that it requires that the pointer button is only accessible when the grip is in a deployed orientation.

In the same field of endeavor, Blazek et al. teaches an apparatus (Figure 6) in which the pointer button is only accessible when the grip is in a deployed position (Figure 6; *{When the grip “37” is adjusted to be covered by the shoulder rest “27” and brackets (not shown), the buttons seen on the grip (Figure 6) are not accessible.}*). In light of the teaching of Blazek et al., it would have been obvious to one of ordinary skill in the art to position the control buttons in the system of Okuyama et al., as modified by Bronson, to only be accessible when the grip is in a deployed orientation, because an artisan of ordinary skill in the art would recognize that this would prevent accidental capture initiation when the user does not intend it.

21. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okuyama et al. (US # 5,815,741) in view of Kubo et al. (US 2001/0004268).

As to claim 19, Okuyama et al. teaches the apparatus of Claim 1. The claim differs from Okuyama et al. in that it further requires that the apparatus define a plurality of memory card slots.

In the same field of endeavor, Kubo et al. teaches a digital camera with a plurality of memory card slots that accepts memory cards (Figure 4, slots “41a” and “41b”; [0043]). In light of the teaching of Kubo et al., it would have been obvious to one of ordinary skill in the art to include another memory card slot in the system of Okuyama et al., because an artisan of ordinary skill would recognize that items in the memory cards in the slots are handled as if they were multiple items of image data recorded in a single large capacity memory card. Consequently erroneous operation in image reproduction may be prevented. In addition image searches may be efficiently performed through a smaller number of steps (see Kubo et al., [0081]).

As to claim 20, Okuyama et al. teaches the apparatus of Claim 7. The claim differs from Okuyama et al. in that it further requires that the apparatus further comprises a plurality of memory card interfaces to permit a plurality of memory cards to be concurrently attached and electronically selected by the apparatus.

In the same field of endeavor, Kubo et al. teaches a plurality of memory card slots (Figure 5, card slots “41a” and “41b”) to which a plurality of memory card devices can be concurrently attached ([0043]) and selected electronically ([0074], Lines 1-5; [0087], Lines 1-8). In light of the teaching of Kubo et al., it would have been obvious to one of ordinary skill in the

Art Unit: 2622

art to include a plurality of memory card slots in the camera of Okuyama et al., because an artisan of ordinary skill would recognize that items in the multiple memory cards in the slots are handled as if they were multiple items of image data recorded in a single large capacity memory card. Consequently erroneous operation in image reproduction may be prevented. In addition image searches may be efficiently performed through a smaller number of steps (see Kubo et al., [0081]).

22. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okuyama et al. (US # 5,815,741) in view of Blazek et al. (US # 4,864,425).

As to claim 22, Okuyama et al. teaches the apparatus of Claim 1. The claim differs from wherein in the deployed orientation, the grip may pivot to at least one self maintaining position on an axis orthogonal to an axis of rotation of the display assembly.

In the same field of endeavor, Blazek et al. teaches a grip that is disposed under the camera and pivots to different positions. Each position is self-maintaining (Figure 1A, Figure 3; Col. 6, Lines 18-31). In light of teaching of Blazek et al., it would have been obvious to one of ordinary skill in the art to include the grip assembly in Blazek et al. in the camera of Okuyama et al., because an artisan of ordinary skill in the art would recognize that this would allow persons of different statures and wingspan comfortable use the camera (see Blazek et al., Col. 6, Lines 23-25).

23. Claims 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okuyama et al. (US # 5,815,741) in view of Rallison et al. (US # 6,160,666).

As to claim 23, Okuyama et al. teaches the apparatus of claim 1. The claim differs from Okuyama et al. in that it further requires that the apparatus comprises a visor coupled to the housing and to rest upon a forehead of the user when held by a user for use, the visor having a cross-dimension selected to maintain a predetermined focal distance between the first lens and an eye of the user, the visor pivots coupled to the display assembly to pivot between an open and a closed position.

In the same field of endeavor, Rallison et al. teaches a binocular display assembly comprising: a visor coupled to the housing (Figures 1 and 15; *{Examiner interprets visor as main portion "12" with shield "302" and forehead brace "22".}*) and to rest upon a forehead of the user when held by a user for use (Figure 15), the visor having a cross-dimension selected to maintain a predetermined focal distance between the first lens and an eye of the user (Figure 2 brace "22"; Figure 15, length of shield "22"), the visor pivots coupled to the display assembly to pivot between an open and a closed position (Col. 5, Lines 8-17; *{Examiner interprets closed position where the visor, as interpreted by examiner, is pivoted above user's eyes via the left and right strap pivots "17a and 17b". Open position is a position as seen in Figure 15.}*). In light of the teaching of Rallison et al. it would have been obvious to include these features in the display assembly of Okuyama et al., because an artisan of ordinary skill in the art would recognize that this would provide a simple, lightweight display assembly (see Rallison et al., Col. 2, Lines 20-23).

As to claim 24, Okuyama et al., as modified by Rallison et al., teaches the apparatus of Claim 23 wherein pivoting the visor to the open position activates the display (see Rallison et al.,

Art Unit: 2622

Figure 15; *{Activated display is interpreted as being able to be viewed (used for intended purpose). In Figure 15, the open position is as seen.}*).

As to claim 25, Okuyama et al., as modified by Rallison et al., teaches the apparatus of Claim 23 wherein when the visor is in the closed position, the display is in an inactive state (see Rallison et al., Col. 5, Lines 8-17; *{Closed position is visor and entire housing pivoted upward so LCD cannot be seen.}*).

As to claim 26, Okuyama et al., as modified by Rallison et al., teaches the apparatus of Claim 23 wherein the visor protects a lens of the display assembly when in the closed position (see Rallison et al., Col. 10, Lines 49-54; *{Shield protects in all positions.}*).

23. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bronson (see Patent Number above) in view of Blazek et al. (see Patent Number above).

As to claim 30, Bronson teaches the apparatus of Claim 28. The claim differs from Bronson in that it requires that the pointer button is only accessible when the grip is in a deployed orientation.

In the same field of endeavor, Blazek et al. teaches an apparatus (Figure 6) in which the pointer button is only accessible when the grip is in a deployed position (Figure 6; *{When the grip "37" is adjusted to be covered by the shoulder rest "27", the buttons seen on the grip (Figure 6) are not accessible.}*). In light of the teaching of Blazek et al., it would have been obvious to one of ordinary skill in the art to position the lens assembly of Bronson "200" where the control buttons "210" are only accessible when the grip is in a deployed orientation, because

Art Unit: 2622

an artisan of ordinary skill in the art would recognize that this would prevent accidental capture initiation when the user does not intend it.

24. Claims 32,33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bronson (see Patent Number above) in view of Kawamura et al. (US # 4,326,783).

As to claim 32, Bronson teaches the apparatus of Claim 28. The claim differs from Bronson in that it further requires a self- powered expander which when actuated expands the display assembly from its stowed volume to its deployed volume.

In the same field of endeavor, Kawamura et al. teaches a motor for expanding a lens into a deployed orientation (Col. 8, Lines 39-45). In light of the teaching of Kawamura et al., it would have been obvious to one of ordinary skill in the art to include a self-powered expander for the display assembly of Bronson, because an artisan of ordinary skill in the art would recognize that this would allow the system to be more automated without the use of manual adjustment.

As to claim 33, Bronson teaches the apparatus of Claim 28. The claim differs from Bronson in that it further requires a self- powered positioner which when actuated transitions the display assembly from its stowed orientation to its deployed orientation.

In the same field of endeavor, Kawamura et al. teaches a motor for expanding a lens into a deployed orientation (Col. 8, Lines 39-45). In light of the teaching of Kawamura et al., it would have been obvious to one of ordinary skill in the art to include a self-powered expander for the display assembly of Bronson, because an artisan of ordinary skill in the art would recognize that this would allow the system to be more automated without the use of manual adjustment.

Art Unit: 2622

25. Claims 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bronson (see Patent Number above) in view of Ohmura et al. (see Patent Number above).

As to claim 36, Bronson teaches the apparatus of Claim 28. The claim differs from Bronson in that it further requires a distributed network interface coupled to the display assembly.

In the same field of endeavor, Ohmura et al. teaches a camera that comprises an antenna for transmitting and receiving images (Figure 43, antenna “325”; [0408]). In light of the teaching of Ohmura et al., it would have been obvious to one of ordinary skill in the art to include the antenna of Ohmura et al. in the display assembly of Bronson “200”, because an artisan of ordinary skill in the art would recognize that this would allow for the transfer of digital images among cameras without the need for a cable that prevents portability.

As to claim 37, Bronson teaches the apparatus of Claim 36 further comprising: a photographic light source (see Bronson, Figure 1A, fill-in flash “150”).

As to claim 38, Bronson teaches the apparatus of Claim 36 further comprising: a photographic light source (see Bronson, Figure 1A, fill-in flash “150”) positioned sufficiently far from the lens assembly to reduce illumination errors (see Bronson, Figure 1A).

As to claim 39, Bronson teaches the apparatus of Claim 36 further comprising: a trigger to cause a capture by the ISA (see Bronson, Col. 2, Lines 18,19), the trigger disposed on the grip to allow actuation by an index finger of a hand holding the grip (see Bronson, Col. 2, Lines 20,21).

Art Unit: 2622

26. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohmura et al. (us 2006/0130645) in view of Kubo et al. (US 2001/0004268).

As to claim **45**, Ohmura et al. teaches the apparatus of Claim 28. The claim differs from Ohmura et al. in that it further requires a plurality of memory card slots.

In the same field of endeavor, Kubo et al. teaches a digital camera with a plurality of memory card slots that accepts memory cards (Figure 4, slots “41a” and “41b”; [0043]). In light of the teaching of Kubo et al., it would have been obvious to one of ordinary skill in the art to include another memory card slot in the system of Ohmura et al. (Figure 27), because an artisan of ordinary skill would recognize that items in the memory cards in the slots are handled as if they were multiple items of image data recorded in a single large capacity memory card. Consequently erroneous operation in image reproduction may be prevented. In addition image searches may be efficiently performed through a smaller number of steps (see Kubo et al., [0081]).

27. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bronson (see Patent Number above) in view of Ohmura et al. (see Patent Number above) in view of Kubo et al. (see Patent Number above).

As to claim **46**, Bronson, as modified by Ohmura et al., teaches the apparatus of claim 36. The claim differs from Bronson, as modified by Ohmura et al., in that it further requires a plurality of memory card interfaces to permit a plurality of memory cards to be concurrently attached and electronically selected by the apparatus.

In the same field of endeavor, Kubo et al. teaches a plurality of memory card slots (Figure 5, card slots “41a” and “41b”) to which a plurality of memory card devices can be concurrently attached ([0043]) and selected electronically ([0074], Lines 1-5; [0087], Lines 1-8). In light of the teaching of Kubo et al., it would have been obvious to one of ordinary skill in the art to include a plurality of memory card slots in the recording/playback devices “14L” and “14R” of Bronson, as modified by Ohmura et al., because an artisan of ordinary skill would recognize that items in the multiple memory cards in the slots are handled as if they were multiple items of image data recorded in a single large capacity memory card. Consequently erroneous operation in image reproduction may be prevented. In addition image searches may be efficiently performed through a smaller number of steps (see Kubo et al., [0081]).

Allowable Subject Matter

28. Claims 4-6,27,29 and 51 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: As to claim 4 and 29, the prior art of record does not teach or fairly suggest a digital display assembly having a stowed orientation and a deployed orientation and wherein when in the stowed orientation, at least 25% of a deployed volume of the display assembly overlaps with a volume of a grip in combination with claim 1 and 28, respectively. As to claim 27 and 51, the prior art of record does not teach or fairly suggest a timer that times out after a predetermined time during which no display event occurred, the time out causing the display to deactivate; and

Art Unit: 2622

wherein cycling a visor activates the display in combination with the rest of the each respective claim.

Conclusion

29. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Daniels whose telephone number is (571) 272-7362. The examiner can normally be reached on 8:00 A.M. - 5:30 P.M..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc-Yen Vu can be reached on (571) 272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2622

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AD

8/31/2006



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